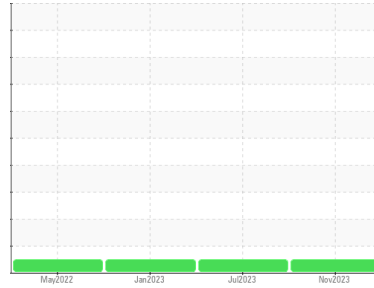




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
810062
 Component
Diesel Engine
 Fluid
PETRO CANADA 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0100585	GFL0077052	GFL0054614
Sample Date	Client Info		11 Nov 2023	01 Jul 2023	07 Jan 2023
Machine Age	hrs	Client Info	3929	3202	2072
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	<1.0
Water	WC Method	>0.2	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>80	28	51	77
Chromium	ppm	ASTM D5185(m)	>5	1	2	3
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	<1
Silver	ppm	ASTM D5185(m)	>3	<1	<1	0
Aluminum	ppm	ASTM D5185(m)	>30	4	4	7
Lead	ppm	ASTM D5185(m)	>30	<1	2	4
Copper	ppm	ASTM D5185(m)	>150	8	27	121
Tin	ppm	ASTM D5185(m)	>5	<1	<1	2
Antimony	ppm	ASTM D5185(m)		0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)		2	4	12
Barium	ppm	ASTM D5185(m)		<1	0	<1
Molybdenum	ppm	ASTM D5185(m)		59	59	63
Manganese	ppm	ASTM D5185(m)		0	<1	3
Magnesium	ppm	ASTM D5185(m)		952	952	865
Calcium	ppm	ASTM D5185(m)		1060	1044	1137
Phosphorus	ppm	ASTM D5185(m)		920	994	922
Zinc	ppm	ASTM D5185(m)		1156	1171	1105
Sulfur	ppm	ASTM D5185(m)		2189	1915	1767
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

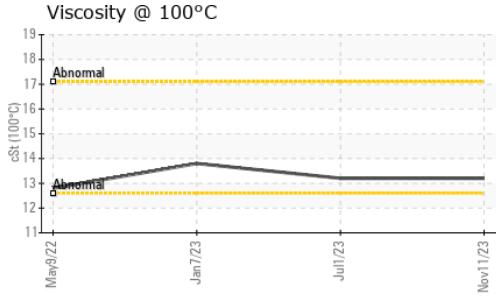
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>20	8	12	13
Sodium	ppm	ASTM D5185(m)		8	3	10
Potassium	ppm	ASTM D5185(m)	>20	4	5	6

INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>3	0.5	0.6	0.6
Nitration	Abs/cm	ASTM D7624*	>20	10.8	13.0	16.4
Sulfation	Abs./1mm	ASTM D7415*	>30	23.5	25.9	28.8



OIL ANALYSIS REPORT



FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs./1mm ASTM D7414*	>25	22.8	28.5	33.9

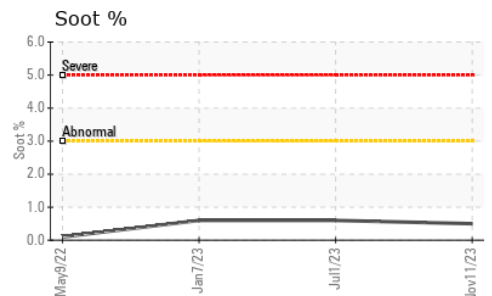
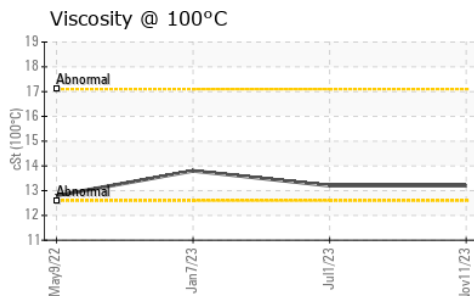
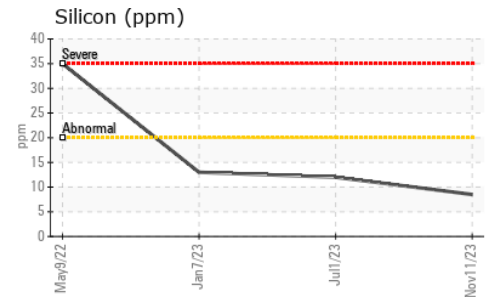
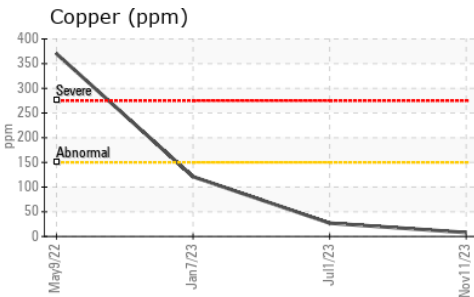
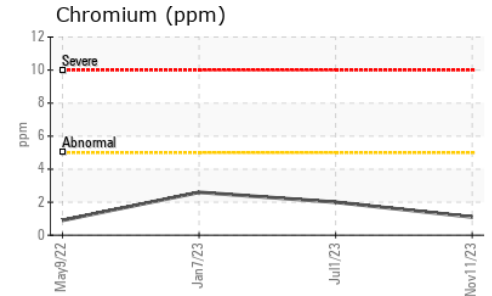
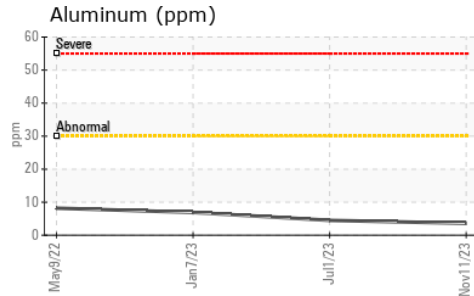
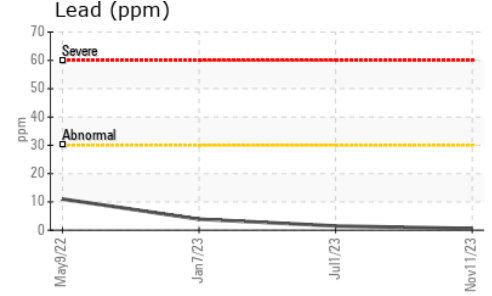
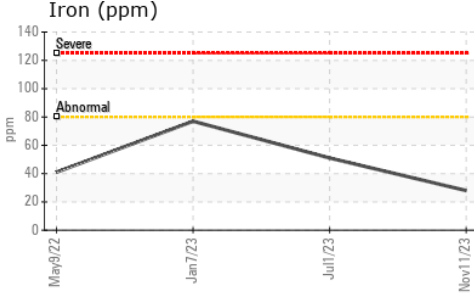
VISUAL

method	limit/base	current	history1	history2	
Emulsified Water	scalar Visual*	>0.2	NEG	NEG	NEG
Free Water	scalar Visual*		NEG	NEG	NEG

FLUID PROPERTIES

method	limit/base	current	history1	history2
Visc @ 100°C	cSt ASTM D7279(m)	13.2	13.2	13.8

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 575 - Squamish Hauling
Sample No. : GFL0100585 **Received** : 20 Nov 2023 38950 Queens Way, Squamish, BC
Lab Number : 02597344 **Diagnosed** : 20 Nov 2023 CA V8B 0K8
Unique Number : 5682424 **Diagnostician** : Wes Davis
Test Package : MOB 1

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.

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 F: (604)892-5238